

Appl. No.: 10/666,654
Amdt. dated August 22, 2005
Reply to Office action of April 21, 2005
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This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Withdrawn) A method for lowering the concentration of hexa-valent chromium in a liquid sample comprising: contacting a ferrous-form zeolite with a liquid sample having a first level of hexa-valent chromium to remove all or part of said hexa-valent chromium, wherein the liquid sample has a second level of hexa-valent chromium after discharge from the ferrous-form zeolite.
2. (Withdrawn) The method of claim 1 wherein said contacting is under non-oxidizing conditions.
3. (Withdrawn) The method of claim 1 further comprising pre-treating said liquid sample prior to contact with the ferrous-form zeolite to reduce the level of oxygen in the sample.
4. (Withdrawn) The method of claim 1 wherein the ferrous-form zeolite is generated having at least 1 meq ferrous ion per gram of zeolite.
5. (Withdrawn) An adsorption column for the removal of Cr.sup.+6 from an aqueous medium, the adsorption column comprising: ferrous-form zeolite for adsorbing Cr.sup.+6 from an aqueous medium; and a housing for retaining the ferrous-form zeolite; wherein the aqueous medium is contacted with the ferrous-form zeolite to adsorb the Cr.sup.+6 in the aqueous medium with the ferrous-form zeolite.
6. (Withdrawn) The adsorption column of claim 5 wherein the zeolite is ferrous-form zeolite comprises at least 0.5 meq ferrous ion per gram of zeolite.

7. (Withdrawn) The adsorption column of claim 5 wherein the housing is an open-ended column for continuous flow chromatography.
8. (Withdrawn) The adsorption column of claim 5 further comprising a blanket of inert gas constrained within the housing that covers the ferrous-form zeolite.
9. (Original) A system for removing chromium from a target medium, the system comprising: a de-airing station for removal of air from the target medium; a chromium adsorption column for removal of chromium from the target medium; and a re-airing station for addition of air to the target medium after chromium has been removed from the target medium; wherein the target medium is moved from the de-airing station to the chromium adsorption column to the re-airing station.
10. (Original) The system of claim 9 wherein the chromium adsorption column is composed of ferrous-form zeolite.
11. (Original) The system of claim 10 wherein the chromium adsorption column is a series of connected columns for housing the ferrous-form zeolite.
12. (Original) The system of claim 10 wherein the ferrous-form zeolite has approximately 0.5 to 2.0 meq ferrous iron/g.
13. (Withdrawn) Ferrous-form zeolite for the removal of chromium from an aqueous medium.
14. (Withdrawn) The ferrous-form zeolite of claim 13 wherein the ferrous is loaded from about 0.5 to about 2.0 meq ferrous iron/gram.